



THE COMMONWEALTH OF MASSACHUSETTS  
WATER RESOURCES COMMISSION

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**Meeting Minutes for March 8, 2001**

**Members in Attendance:**

Mark P. Smith	Designee, EOEa
Peter C. Webber	Commissioner, DEM
Mark Tisa	Designee, DFWELE
Marilyn Contreas	Designee, DHCD
Glenn Haas	Designee, DEP
Joe McGinn	Designee, MDC
Gary Clayton	Public Member
Richard Butler	Public Member
Dave Rich	Public Member
Frank Veale	Public Member

**Others in Attendance:**

Linda Marler	DEM
Mike Gildesgame	DEM
Richard Thibedeau	DEM
Chris Hardy	Mass Audubon
Michele Drury	DEM
Martha Stevenson	League of Women Voters
Kathy Rich	Public
William Shaughnessy	MWWA
Lorraine Downey	MWRA
Marian Berkowitz	MDPH
Kwabena Kyei-Aboagye	EOEA
Peter Phippen	EOEA
Peter Weiskel	USGA
Laura Harrahy	NepRWA
Alan Slater	DEP
Vicki Gartland	DEM
Ron Sharpin	MDC

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**Agenda Item #1: Executive Director's Report**

- Smith reminded the WRC that public hearings on the Foxborough IBT application will be held on March 29<sup>th</sup> at 6:30 PM in Attleboro and April 5<sup>th</sup> at 7 PM in Foxborough. He strongly encouraged all members to attend.

- The drought management plan has gone out for public comment. After comments are incorporated, we will ask for a commitment from the agencies to use the plan.
- Drury and Smith attended a recent Stoughton town meeting. Stoughton is looking for a new water supply source. They were denied the Cedar Swamp well under the ITA. Now they are deciding between Bluestone and the MWRA. According to the ACO entered into with DEP, they must make a decision by May. This meeting was to decide on money to fund a study of a connection to MWRA. There is another town meeting on April 5<sup>th</sup> to discuss whether to go to Bluestone or the MWRA. Town staff recommended joining the MWRA and the selectmen voted for this option by 3 to 2, but it is still being studied because of the unknown costs associated with putting a water line through Canton.
- Smith distributed copies of the Lakes & Ponds Strategy to WRC members. The Secretary has added over \$1 million for the lakes and ponds program to energize local groups.
- Doug McDonald will leave the MWRA at the end of the month to take a job in Washington state.

Marler provided an update on the hydrologic conditions.

- February's precipitation was lower than normal. Statewide, we are at 81% of normal. March may be better due to the snowfall events of the last week. This has led to concern about flooding, if temperature rises, as is predicted for next week. Another snowfall event is predicted for Friday, which is expected to bring 3-6 inches. This is a good recharge event, and is desperately needed.
- Ground water levels for February were below normal in half the state, which is unusual for this time of year. A slow snowmelt will mitigate these low levels. Cape Cod will not get as much benefit because there is not that much of a snow pack there.
- Streamflow is back around normal, after being down due to low precipitation.
- Reservoir levels are normal.
- Predictions are for normal conditions for the remainder of the spring.
- Cumulative precipitation is a bit low, but we are above normal for the first week of March. The Weather Service says we can expect two more moderate or greater snowstorms by April 15<sup>th</sup>.

**Agenda Item #2: Vote on the Minutes of March 2000**

Smith stated that we are trying to catch up with the backlog of the minutes but the shortage of staff has made this difficult.

<b>V O T E</b>	Butler moved with a second by Webber to accept the minutes of March 2000.
	The vote was unanimous of those present.

**Agenda Item #3: Presentation on the Water Conservation Bill**

Wagner was unable to attend because of school cancellations; however Mass Audubon developed a summary of the Bill. These, and the Bill itself, were distributed by Smith. There is a hearing on it on April 5<sup>th</sup>. This will be on the agenda next month.

**Agenda Item #4: Presentation of the Draft Stressed Basin Report**

Gartland distributed copies of the draft report and attachments for those who did not receive them. The purpose of the report is to inform proponents and agency reviewers about the status of the river basins in the Commonwealth. The group found that a lot of the data needed was not computerized. They took the data that was available and looked at what the agencies were using to evaluate projects. We define “stress” based on three characteristics: quantity (flow), quality, and habitat. The “first cut” analysis used stream gaging data to define stressed based on quantity. A comparative analysis which sorted from high to low flows was completed. It was decided that the areas with the lowest flow were areas to concentrate on by requiring mitigation, more study, etc. in these areas. There are many areas where we don’t have any flow data. There have been discussions about setting up a network of volunteer flow monitors to help with this.

Next the group outlined a method that would help a proponent develop a water budget on a subbasin level to determine if the subbasin is hydrologically stressed. For future work, there is data that needs to be computerized, for example the water use data collected by DEP. The agencies are doing a pilot with USGS. We would like to be able to use this data for doing water use analyses. DFW is trying to computerize their data.

Next steps: The group is trying to access the water quality data that DEP collects. Much of this is on GIS. It would be useful to incorporate this into our analyses. An important thing that has come out of this effort is that we now have another way to categorize the Ipswich River as highly stressed.

Haas asked if we had looked at long-term data to determine if high flows are increasing or low flows decreasing due to the impacts of increased impervious surfaces. Gartland replied that this was looked at briefly, but nothing conclusive was found. The problem we encountered is that high flows can result from more impervious surfaces or for other reasons, such as flooding, steepness, dams, etc. It is hard to separate out the causes. This continues to be something we are interested in pursuing. MAGIS, under its land use data, has the percent impervious surfaces, based on type of land use. We’d like to also look at long term flows to see if there is a pattern.

Webber asked if we should prioritize data needs. How can we mesh volunteer monitoring with existing gages? Gartland replied that we can compare measurements on a square mile basis to determine how flows relate or how they should relate. But we need to make sure we have quality control in terms of the methods the volunteers are using.

Gartland stated that we’ve noticed that when we’ve applied this methodology to gages in smaller drainage areas, it shows smaller flows per square mile than gages which measure larger drainage areas. This may not really be an indication of stress. Clayton suggested that if we looked at the biological information, this might change. Gartland replied yes, this methodology just indicates flows. Haas suggested that Gartland contact Mike Stroman at DEP, who has been working with USGS, to see if there is any way to refine this. He then asked if we knew how basin stress and demand relate. We should look at this so we can figure out what to do from a regulatory and planning perspective.

Webber asked if we had enough data to compare a basin to itself over time in a meaningful way. Gartland answered that some basins have a lot of data and you can use the methodology for

indicators of hydrologic alteration if you had the time and staff. Some of the methodologies DEM developed in the river basin planning program, which have been incorporated here, such as the inflow/outflow method, are now being used at the local level by team leaders, municipalities etc. so this will provide some consistency.

This report was sent to team leaders. It has also gone back to the committee and we will be scheduling another meeting to discuss it. Smith suggested that a notice should be put into the Environmental Monitor to give the public a chance to comment on it. He also stated that Eileen Simonson of WSCAC had reviewed the report and wanted it to be noted that WSCAC thought it was great.

**Agenda Item #5: Outdoor Water Use and DEP's Water Reuse Policy**

Murphy discussed lawn and landscape policy and model guidance. This was discussed in the fall. She also discussed an article in a trade publication for the irrigation industry which addressed the regulatory climate in Massachusetts with respect to the industry. The article indicates that the industry supports what we are trying to do in terms of tying outdoor water use to water conservation.

Recommendations:

1. Develop a public outreach program
2. Investigate a certification program for irrigation system installers
3. Put conditions for irrigation equipment into the plumbing code
4. Investigate water reuse for large-scale residential developments
5. Develop a landscape water use policy
6. Investigate seasonal withdrawals from public water supplies

The purpose of the draft policy under discussion is to address the impacts of landscape water use on municipal water supplies. This use places the systems under stress and can have severe ecological impacts. The policy states that water for these purposes should not be used at the expense of public health and safety or the environment. Water used for landscape and lawn irrigation should be used in a manner to minimize use through sound water conservation and efficiency practices.

The policy has 3 objectives:

1. To protect the Commonwealth's water resources in a manner compatible with managing natural resources
2. To increase public awareness of appropriate practices to minimize the amount of water used.
3. To encourage water suppliers and municipalities to develop drought water shortage plans.

There was some discussion initiated by Webber regarding private irrigation wells and how the policy would reflect that issue. Webber acknowledged that recreational playing fields get intensive use and require maintenance. Rich mentioned enforcement problems, and whose responsibility that should be. Rich also mentioned that AWWA estimates that 75% of water used in mid-day watering is lost to evaporation. Clayton expressed concern that the policy would be viewed as a new unfunded mandate issued by the state, and suggested the policy be

changed in format to a Q&A piece. Clayton also asked if pricing was seen as an effective conservation tool, noting that some suppliers have a conflict in terms of revenue generation. Rich asked how the state would be made to comply with the policy. Answer was Executive Order.

Slater discussed the DEP water reuse policy. For golf courses, treated wastewater will go to storage ponds and be used as needed. The ponds will be lined and aerated. It is required that the ponds be recirculated. There must be contingency plans in place, in case the water quality is unacceptable; a shut off valve will be required and then the wastewater will be transported to an acceptable disposal location.

Buffers and set backs are required: 100 feet from private wells and 50 feet from buildings. Spray must be on a low trajectory and is only allowed during low wind speeds to minimize aerosols. Groundwater and surface water monitoring programs are required. The landscape reuse policy has basically the same requirements.

In Florida, residences use recycled water through a special connection to water lawns and shrubs. Also in Florida, municipal landscapes, parks and ball fields use reclaimed water all the time. During droughts they've even run out because of the economic incentive to use recycled water. The Wrentham Outlet Mall uses recycled water for toilet flushing. These systems need dual plumbing (potable/reclaimed) and also can use smaller leaching fields. They put up signage stating the fixtures use reclaimed water.

Artificial aquifer recharge is the most controversial part of the policy. One community where it was recommended did not implement it because of public perception, even though from an environmental and technical standpoint, it is acceptable. It could be an important tool for stressed basins to keep water in basin. It was asked if this wastewater was coming from a municipal treatment plant? Yes, it has to be treated to high standard. Then it goes to disposal field (underground usually) and percolates through ground to get into recharge area of the well. The standards for DEP's water reuse policy are extremely high.

Challenges:

- Public perception
- This has never been done in Massachusetts; we are conservative
- It costs more (though costs are going down)
- Irrigation is seasonal; must do something with the wastewater other times of the year

Next steps:

- Pilot program to look at uses not currently allowed in Massachusetts to see if they make sense to incorporate
- Look at what other states are doing with water reuse
- In stressed basins, it may be mandated that this policy is looked at more closely for implementation

The policy is not used for individual residences (graywater from septic systems). Some states implement reuse policies in this manner, but here residences are not a top use of this water. DEP will be looking at graywater reuse.

Tisa asked if DPH had reviewed and commented on this. Have there been any public health problems associated with water reuse in Florida? Slater answered that there were no reported claims of public health problems associated with water reuse in Florida. DPH did review that policy as it was being drafted and found it acceptable. In states where water reuse is common (FL and CA) groundwater quality is terrible. You have to treat groundwater before you can use it. The economics drive reuse (you don't want to use expensive treated groundwater to water your lawn).

The reuse policy is available from DEP's website.

**Agenda Item #6: Discussion of the Water Policy Statement**

Smith stated that part of this year's work plan was to consider an update of the water policy statement. The policy doesn't address peak demand/outdoor water use, the decentralized wastewater approach, or stressed basins. Are there any others? Smith suggested that these issues should be incorporated into the statement and encouraged members to think about it. Are there things that no longer apply? Should we convene the task force to do this update?

Meeting adjourned

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Minutes approved 8/14/03